

Test

• Solving differential Equations

→ generally ex. $\frac{dy}{dx} = \sec^2 x + 2x + 5$

→ explicitly ex. $\frac{dy}{dx} = e^x - 6x^2$ pt. (1, 0)

• u-substitution ex. $\int x^2 \sqrt{5+2x^3} dx$

• Using Trig Identities ex. $\int \cot^2(3x) dx$ identity $\cot^2 x = \csc^2 x - 1$

• Definite Integrals w/ u-substitution ex. $\int_0^{\frac{\pi}{3}} \tan x \sec^2 x dx$

• Separation of variables $\frac{dy}{dx} = \cos x e^{y+\sin x}$ pt. (0, 0)

• Newton's Law of cooling ex. 6 p. 355

• Exponential growth (investments) ex. 2 p. 352